

**SITE DESCRIPTION:** Linville Gorge is a deep, narrow, 10-mile-long gorge in the Blue Ridge Escarpment with 2000-foot high, steep valley walls formed by the erosion of thick beds of quartzite rock by the Linville River. Beginning about one-half mile south of Linville Falls, this site extends south to near Lake James. It is ringed by numerous summits capped by quartzite. It contains excellent examples of geomorphic features such as entrenched river meanders and an exposure of one of the largest thrust faults in the United States. The gorge also contains small inclusions of limestone, a rare rock type associated with many rare plant species.

Excellent, old-growth examples of Canada Hemlock Forest and the rare Carolina Hemlock Bluff communities are present. The Canada Hemlock Forests are extensive on rugged lower slopes and support numerous trees to 48 inches in diameter. Canopy treefall gaps, down logs, and snags are common. Canada hemlock (*Tsuga canadensis*) dominates the canopy, though appreciable sweet birch (*Betula lenta*), red maple (*Acer rubrum*), and Fraser magnolia (*Magnolia fraseri*) are present. Rosebay rhododendron (*Rhododendron maximum*) and gorge rhododendron (*Rhododendron minus*) form a dense shrub layer in many places. Herbs are typically sparse.

Old-growth examples of the rare Carolina Hemlock Bluff community, forming an extensive occurrence in aggregate, are present in the gorge interior. They occur on south-facing sides of spur ridges and steep middle slopes on thin soils and are embedded in a mosaic of other forest communities. They are dominated by Carolina hemlock (*Tsuga caroliniana*), itself an uncommon endemic of the Southern Appalachians. Table mountain pine (*Pinus pungens*), white pine (*Pinus strobus*), chestnut oak (*Quercus montana*), black gum (*Nyssa sylvatica*), and sourwood (*Oxydendrum arboreum*) also exist in the canopy. An open to dense shrub layer of rosebay rhododendron and gorge rhododendron fills the understory of these communities.

A majority of the gorge is covered by mature, undisturbed oak and pine forests. Chestnut Oak Forest is widespread on steep upper slopes, especially in the southern two-thirds of the gorge. Along with chestnut oak, the forest canopy contains smaller numbers of white pine, red maple, Canada hemlock, red oak (*Quercus rubra*), white oak (*Quercus alba*), black gum, and hickory (*Carya* sp.). Root sprouts of the American chestnut (*Castanea dentata*) are occasional. Frequent shrubs include black huckleberry, dryland blueberry (*Vaccinium pallidum*), gorge rhododendron, and mountain laurel. Herbs are typically sparse. White Pine Forests are also very extensive in the gorge, occupying north-facing middle and upper slopes and spur ridges. Their canopies are dominated by white pine, with a subcanopy of sourwood, red maple, black gum, and other hardwoods. Gorge rhododendron and mountain laurel are common in the understory. Although these forests are not in old-growth condition, they have not been cut and probably represent regeneration after natural fire.

The crests of Hawksbill Mountain, Tablerock Mountain, The Chimneys, and areas southward on the east rim of the gorge support the state's only examples of the Quartzite Variant of the rare High Elevation Rocky Summit community type. They are distinctive due to the extreme acidity and hardness of the quartzite and dryness due to relatively low elevation. The ecotone between these rocky summits and associated Heath Bald and Pine--Oak/Heath communities support the very rare mountain golden-heather (*Hudsonia montana*). Collectively, these areas comprise the